PRELIMINARY SITE ASSESSMENT

BAYONNE BARREL AND DRUM COMPANY

NEWARK, NEW JERSEY

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TDD #2-8407-25

Prepared for:
Dave Rogers
Response and Prevention Branch
Office of Emergency and Remedial Response
U.S. EPA, Region II
Edison, New Jersey 08837

By:
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TAT-02-F-01121

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BACKGROUND:

Bayonne Barrel and Drum Company was a reconditioner of drums located at 154 Raymond Boulevard in Newark, New Jersey. The property is bounded by: Routes 1 and 9 on the west and north; the New Jersey Turnpike on the east; and the Newark Drive-In on the south (see Figure #1).

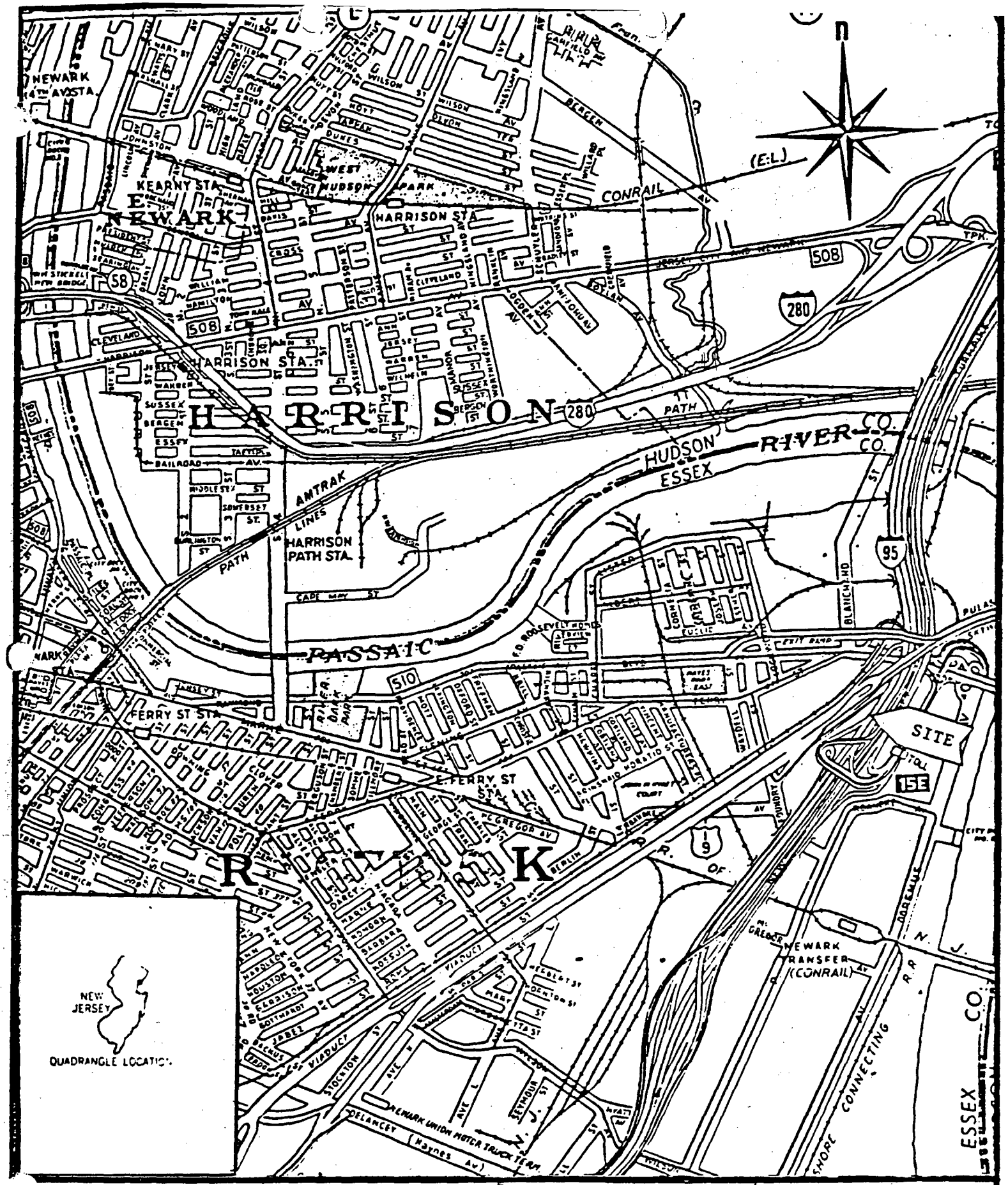
Drum cleaning operations formerly involved both closed head and open head drums. In closed head cleaning, chains and a caustic solution were used to wash out previous material in the drums. The spent solution drained through an oil/water separator into a 5,000 gallon underground holding/settling tank and was then pumped into a 60,000 gallon above ground holding/settling tank. The liquid was decanted to the sewer under a permit to the Passaic Valley Sewage Commission. Open head drums were placed on a conveyor belt and moved through an incinerator which burned residue out of the inside. This residue material was collected in two subsurface holding/ settling tanks. Approximately 40,000 lbs. of incinerator ash and sludge were generated monthly.

The company has been the focus of considerable U.S. EPA and New Jersey Department of Environmental Protection (NJDEP) activity related to the management of hazardous wastes generated in its operations.

Bayonne Barrel and Drum Company ceased operations sometime in the Winter of 1983. They have filed for bankruptcy. A skeleton crew remains on site to oversee the sale of equipment and inventory.

OBJECTIVE:

At the request of the U.S. EPA, Region II, Response and Prevention Branch, U.S. EPA representative, Dave Rogers and TAT members, Craig Moylan and Christopher Marlowe visited this site to conduct a preliminary site assessment and evaluate the need for an immediate removal action under 40 CFR 300.65(a) of the National Oil and Hazardous Substances Contingency Plan.



WESTON	SPILL PREVENTION & EMERGENCY RESPONSE DIVISION	EPA PM Dave Rogers	Figure 1
In association with ICF, Inc., Jacobs Engineering, Inc., & Tetra Tech, Inc.		TAT PM Chris Marlowe	Site location

PERSONNEL REFERRED TO IN THIS REPORT:

Name	Affiliation
Dave Rogers	U.S. EPA Region II Emergency Response Branch GSA Depot Woodbridge Avenue Edison, NJ 08837 (201) 321-6666 (FTS) 340-6666
Craig Moylan	Roy F. Weston, Inc. Weston/SPER Division 300 McGaw Dr., 2nd Floor Raritan Center Edison, NJ 08837 (201) 225-6116
Christopher Marlowe	" " "
Frederick A. Sickels, III Ke	NJDEP Division of Waste Management 120 Route 156 Yardville, NJ 08620 (609) 292-5560
Robert Bienz	Newark City Engineers Office 920 Broad Street Newark, NJ 07102 (201) 733-8820
Tom Downey	NJ Department of Environmental Protection Division of Waste Management Red Lion, NJ (609) 859-2958
Frank Langella	Bayonne Barrel and Drum Co. 154 Raymond Boulevard Newark, NJ 07102 (201) 589-0110

SITUATION:

U.S. EPA representative, Dave Rogers and TAT members, Craig Moylan and Christopher Marlowe arrived at Bayonne Barrel and Drum at 9:00 A.M. They entered at 9:10 A.M. to conduct an opening conference with Frank Langella of Bayonne Barrel and Drum Company.

They were joined by Fred Sickels of the NJDEP during this conference. During this conference, Mr. Langella stated that Bayonne Barrel and Drum has a reputation for orderly operations. He also stated that he, personally, owns 5-1/3 acres of the 20 acre site (see Figure #2).

Rogers, Moylan, Marlowe and Sickels began their site inspection at 9:40 A.M. They used an Organic Vapor Analyzer (OVA) for air characterization and an MSA Combustible Gas Meter for oxygen/explosive vapor monitoring (see attached air data sheets) . No oxygen deficiency or potentially combustible atmospheres were observed. The background reading on the OVA was 2 ppm.

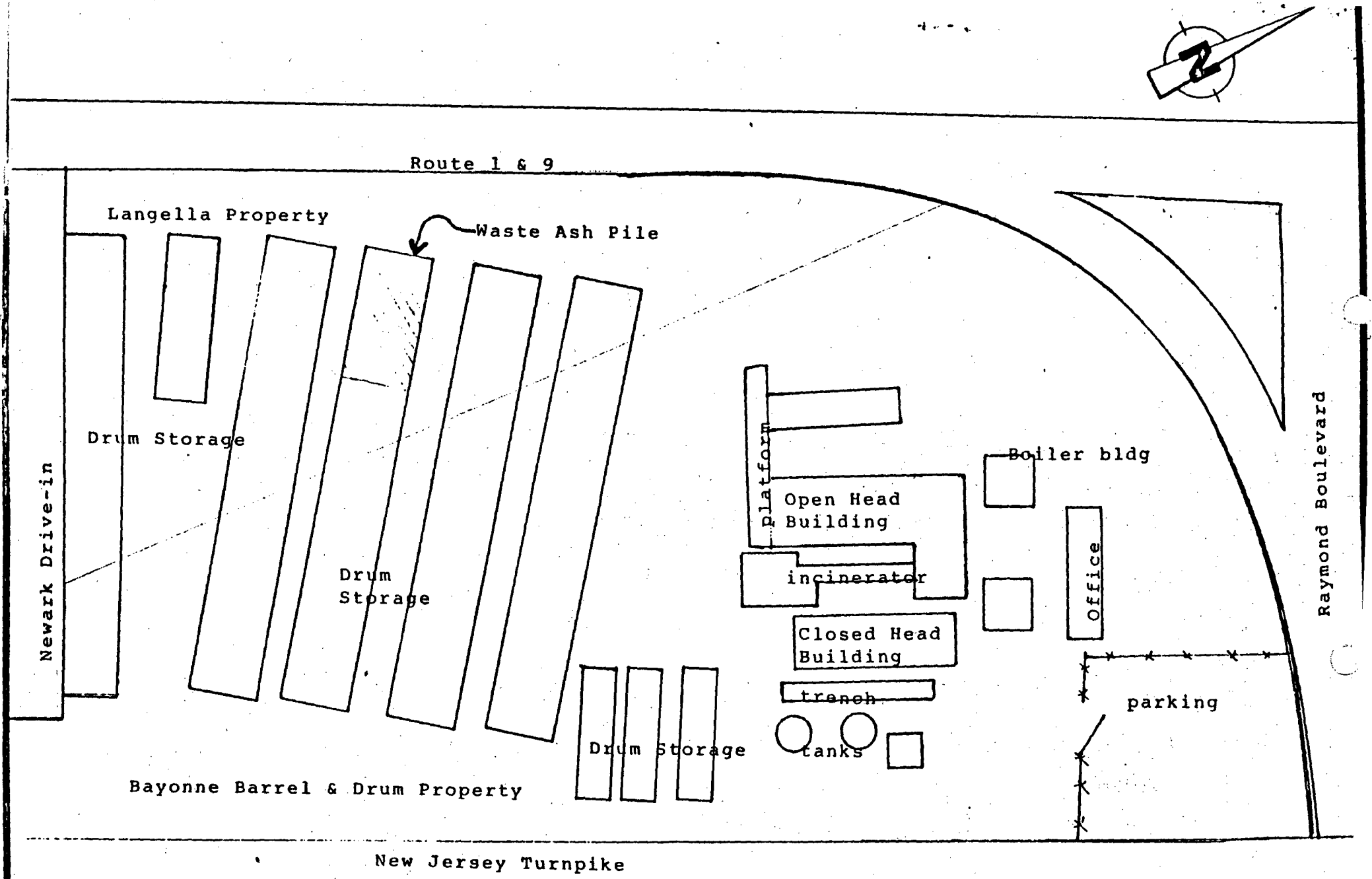
The weather during the inspection was warm and humid (86°F and 60%RH). There was a mild breeze. The ground was moist from rain earlier in the week.

A guard checked the Response team in at the gate. The site is entirely surrounded by a 6-foot high Cyclone® fence with 3 strands of barbed wire on the top. The team saw no evidence of vandalism or use of the property by unauthorized personnel. According to Robert Bienz, of the Newark City Engineers Office, the property drains via a storm sewer system into Harrison Creek and thence to the Passaic River.

The team entered the closed head drum cleaning building first. They observed a 4-inch layer of sludge under the drain stations. This sludge and the slicks of oily material on the floor throughout the building yielded no elevated reading on the OVA. A workman was in the process of dismantling the cleaning line while we were present.

The open head drum incinerator is located between the closed head and open head buildings. It consists of a chain-link conveyor and a brick-and-steel furnace housing. A black sludge about 4 inches thick has been deposited under the open conveyor links. The OVA showed no excess over background from this sludge. This sludge is probably the ash residue from incineration. There was a pile of black grit at the north end of the incinerator conveyor. There were smears and slicks of oily material on the ground in the incineration area that yielded no elevated readings on the OVA.

The open head drum building contains a spray line and bake oven. There was some paint sludge in the spray zone which yielded no elevated OVA readings. There is also a rectangular "sump pit" at the north end of the bake oven conveyor. The OVA registered 90 ppm over this pit, which may be in communication with the soil below the building.



WESTON SPILL PREVENTION & EMERGENCY RESPONSE DIVISION In association with ICF Inc., Jacobs Engineering, Inc., & Tetra Tech, Inc.	EPA PM Dave Rogers	Figure 2	
	TAT PM Chris Marlowe	Not to scale	BAYONNE BARREL & DRUM CO

There are approximately 35,000 drums stored outdoors on the southern 2/3 of the property. These drums are mostly "empty" and ready to be reconditioned. They are stacked in rows directly on the ground. The names of many companies appear on the drum labels, among them: DuPont; National Starch; Peerless Tube; Lucidol; 3M; and Alpha Metal. OVA levels in ambient air in the drum storage area were negligible. They measured 100 ppm in an open drum marked "Toluene Di-Isocyanate" and 20 ppm over the soil near a leaking drum. An OVA level of 10 ppm was read in the ambient air in the southeast of the site. The team saw shiny new bungs on some old drums of "desmophen". Also, some "empty" 10-gallon drums of "t-butyl peroxide" were stored on site.

There is a pile of waste ash on the west side of the drum area. It is approximately 110 feet long, 50 feet wide, and 4 feet high, which corresponds to about 1,000 tons of material (calculated as 22,000 cubic feet times 62.43 pounds per cubic foot times an arbitrary density of 1.45). The waste is neither covered on top nor lined underneath. The waste appears black and oily. There was a pool of standing water on the pile. Black mud oozed from the side. OVA readings were 10 ppm over this ooze. An area of soil about 4 feet wide by 60 feet long located at the northwest corner of the open head building looked like it had been dug and refilled.

The oil/water separator station was "left as it was (F. A. Langella) on the last day of operation." Some rust and deterioration is apparent. Mr. Langella stated that the tanks are either empty or filled with water or cleaning solution. We did not observe any leaks from the above ground tanks. We could not evaluate leakage from the below ground tanks.

During the exit conference, Dave Rogers asked Frank Langella whether he could cover the waste pile with plastic sheet. Mr. Langella indicated that he has sufficient sheet in his possession and that he can do so.

DISCUSSION:

Bayonne Barrel and Drum Company's operations generated hazardous wastes. The waste ash pile was first described by NJDEP inspector Tom Downey in March of 1981. At that time, it was 40 feet long, 35 feet wide, and 2 feet high. The USEPA Waste and Toxic Substance Branch sampled and analyzed the ash pile and oil/water separator tanks in February, 1984. The results are tabulated in Tables I - V.

The ash contains considerable concentrations of lead, cadmium, and copper. The lead and cadmium yield high results in the Extraction Procedure Toxicity test. Significant amounts of organic chemicals were found in the ash. Soil samples taken near the ash contained 175 mg/kg of tetrachloro and pentachloro biphenyls (PCBs). Water samples from the separator tanks reveal considerable amounts of organic contaminants.

In addition, Bayonne Barrel and Drum has not applied for a permit to operate a hazardous waste storage facility. The drums are apparently stacked in the order in which they arrived with little or no regard for the chemical compatibility of their contents. Bayonne Barrel and Drum does not test ground or surface water for chemical contamination. Bayonne Barrel and Drum has no program for controlling leaks or spills. The facility has made no provision to control movement of their waste inventory into the air, rivers, or groundwater. Some contamination enters surface and groundwater. These waters are not now used for drinking, sanitation or fishing.

We found no atmosphere greater than 3% of the lower explosive limit and site security is tight enough to minimize ignition sources. The drums may contain a flammable air vapor mixture. Some of the drums might also contain chemicals that degrade to form highly reactive, pyrophoric, shock-sensitive or autoreactive materials. The danger of fire and explosion at this site is minimal although a complete evaluation of fire and explosion hazards would require individual examination of each drum.

Table I

Comparison of Sample Analysis to Characteristic of EP Toxicity

Parameter	Maximum Concentration for EP Toxicity mg/l	ash pile 65184 mg/l	ash pile 65185 mg/l	ash pile 65186 mg/l	Soil near ash 65187 mg/l	SS tank 65191 mg/l	Soil near ta 65192 mg/l
Arsenic	5.0	.02K	.02K	.02K	.02K	.02K	.02K
Barium	100.0	4.0	5.3	1.3	1.5	.16	1.7
[redacted]	1.0	.99	[redacted]	.17	.08	.002K	.04
Chromium	5.0	.02J	.01J	.04	.008K	.02J	.08J
[redacted]	5.0	[redacted]	[redacted]	2.4	.25	.04	.10
Mercury	0.2	.0002K	.0002K	.0002K	.001	.0002K	.0002K
Selenium	1.0	.008K	.02J	.008K	.008K	.009J	.008K
Silver	5.0	.002K	.002J	.002K	.002J	.002K	.002K
Endrin	.02	.000008K	.000008K	.000008K	.000008K	.000008k	.000008
Lindane	.4	.00003	.00004	.00023	.00066	.00002	.000003
Methoxychlor	10.0	.00038	.00008K	.00328	.01100	.00054	.00059
2,4,-D	10.0	.0003K	.0003K	.0073	.0080	.0003K	.0003K
Silvex	1.0	.00007K	.00007K	.00007K	.00007K	.00007K	.00007K
Toxophene	0.5	.00035K	.00035K	.00035K	.00035K	.00035K	.00035

K = Actual valve less than valve given
J = Estimated valve

65184, 65185, 65186 - Ash Pile
65187 - Soil by Ash Pile
65191 - Subsurface Tank Near Incinerator
65192 - Soil by Subburface Tank Near Incinerator

Results of Metals Analysis on Samples

Parameter	65184 mg/kg	65185 mg/kg	65186 mg/kg	65187 mg/kg	65192 mg/kg
	ash	ash	ash	soil	soil
Silver	3K	3J	3K	3K	3K
Arsenic	7.5	6.6	3J	23	7.0
Beryllium	1J	1K	1K	1K	1K
[redacted]	160	120	84	59	13
Chromium	2900	1800	3300	650	1200
[redacted]	3300	2400	1100	1000	1100
[redacted]	12	.5J	21	27	7.4
[redacted]	21,000	13,000	17,000	4500	2700
[redacted]	250	250	79	99	850
Antimony	.8K	.8K	.8K	.8K	.8K
Selenium	.9J	5.1	.8K	4.2	2J
Thallium	.8K	.8K	.8K	.8K	.8K
[redacted]	3400	3800	3500	2300	1900

K = Actual valve less than valve given
J = Estimated valve

65184, 65185, 65186 - Ash Pile
65187 - Soil by Ash Pile
65192 - Soil by Subsurface Tank Near Incinerator

Results of Organics Analysis on Samples

Organic Compounds	oil/water trench 65188 ug/l	5000 tank 65189 ug/l	SS tank 65191 ug/l
[redacted]		90J	
[redacted]	1800J		1300
[redacted]	1500J	1400	
Bis(2-ethylhexyl) phthalate	13,000	6900	
Butyl benzly phthalate		1100	
Di-n-butyl phthalate	3800J	1800	
Fluorene		70J	
Phenanthrene	2500J	290	
Pyrene		60J	
[redacted]			110J
[redacted]			4900

J = Estimated valve
K = Actual valve less than valve given

65188 - Oil Separator
65189 - 5,000 Gallon Tank
65191 - Subsurface Tank by Incinerator

Table VI

Results for PCB Analysis

PCB	Soil #65187
Aroclor 1248	67.2 mg/kg
Aroclor 1254	117.5 mg/kg

65187 - Composite soil sample by ash pile

Table Va

Results of Organic Analysis on Samples

ganic Compounds	ash 65184 ug/kg	ash 65185 ug/kg	ash 65186 ug/kg	soil 65187 ug/kg	soil 65190 ug/kg	soil 65192 ug/kg
[redacted]			4300J	2500J	1400J	
[redacted]			8400	1200J		
[redacted]		730				
[redacted]		240				
[redacted]	3200J		11000	1900J	1500J	2300J
[redacted]	2600J	280	15000	12000	12000	3700J
[redacted]	92000	22000	250000	27000		25000
[redacted]	110000	8300	180000	18000	22000	12000
[redacted]	20000	120	1700J	2000J	4800J	780J
is(2-ethylhexyl)phthalatel	800000	11000	1200000	990000	1200000	210000
utyl benzyl phthalate	370000	2100	1200000	210000	400000	200000
i-n-butyl phthalate	450000	2100	330000	110000	280000	280000
)i-n-octyl phthalate	5700J	1200	7200	3800J		770J
)iethylphthalate	9700	400				
)imethylphthalate	24000					
[redacted]	1200J	160		1800J		3100J
Anthracene	2300J	100	8000	3000J		1400J
Fluorene	2400J	57K	7400	3200J	3300J	1600J
Phenanthrene	12000	900	32000	17000	28000	7000
Pyrene	3600J	260	14000	15000	9000	4700J
[redacted]	80000	170	46000	5800J		4700J

J = Estimated valve
K = Actual valve less than valve given

Table Vb

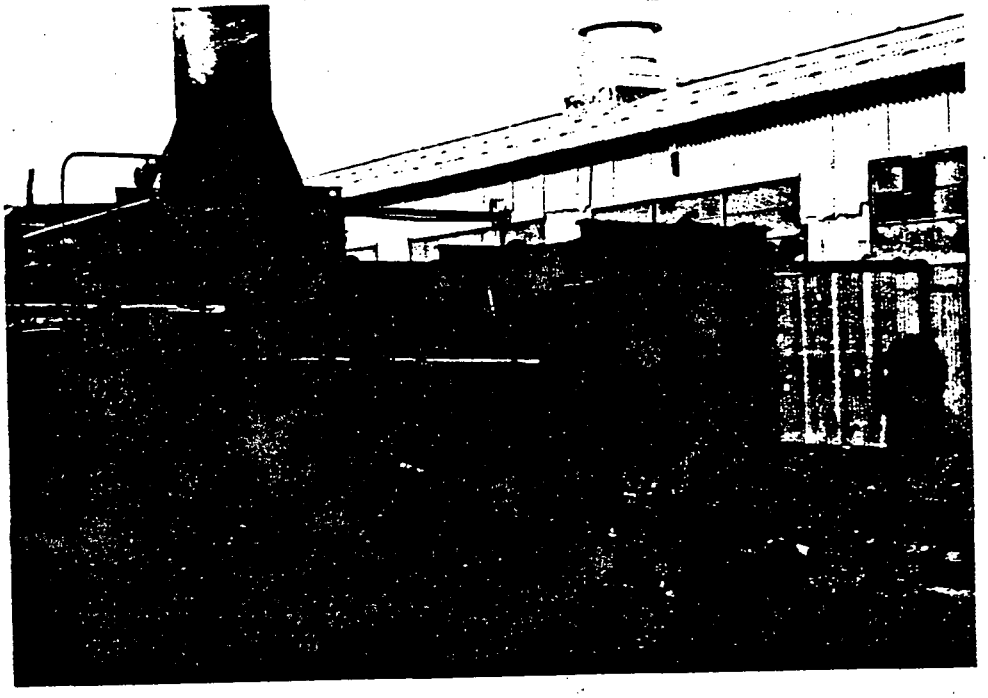
Results of Organic Analysis on Samples

Organic Compounds	ash 65184 ug/kg/	ash 65185 ug/kg	ash 65186 ug/kg	soil 65187 ug/kg	soil 65190 ug/kg	soil 65192 ug/kg
[redacted]	160	130	480		15	
[redacted]	46		88	36		
[redacted]	58	380	7000	350	15	
[redacted]	320	67	500	16		
[redacted]	1300		5000	660		
[redacted]	47	120	160	23		
1,1-dichloroethylene	68		400	13		
1,2-dichloropropane		18K				
[redacted]	3200	1900	65000	120	580	
[redacted]	10000	4600	8700	1500		
[redacted]	1800	1300	2600	460	100	
Toluene	28000	11000	320000	630	1700	
[redacted]	2200	1200	8100	290	19	
[redacted]	1600		150			

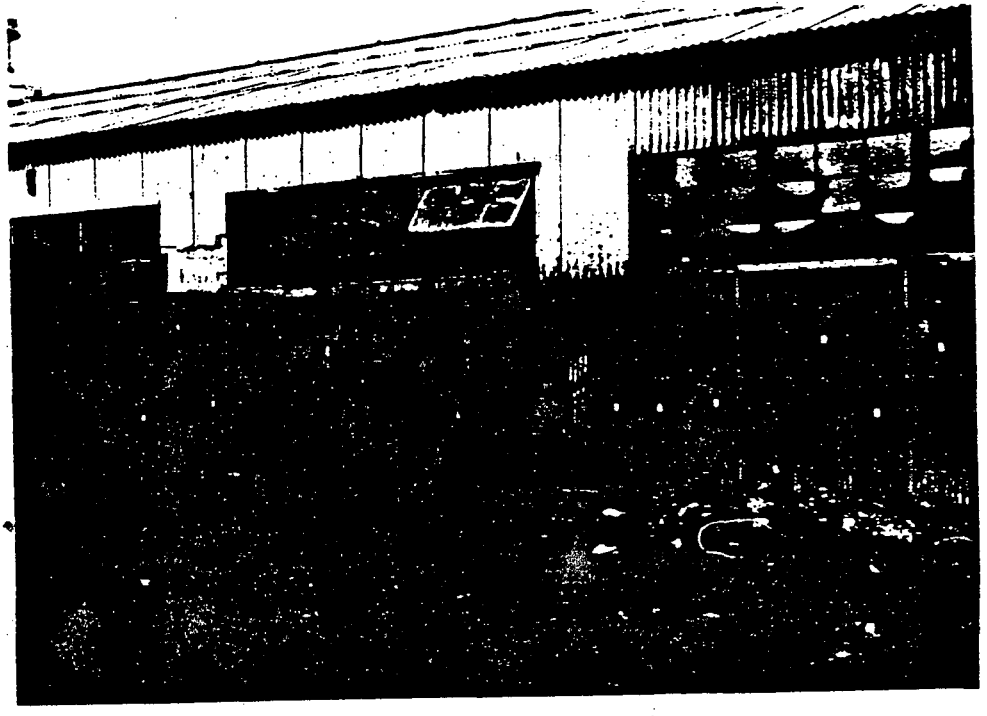
J = Estimated valve
K = Actual valve less than valve given

65184, 65185, 65186 - Ash pile
65187 - Soil by Ash Pile
65190 - Soil by 5,000 Gallon Tank
65192 - Soil by Subsurface Tank Near Incinerator

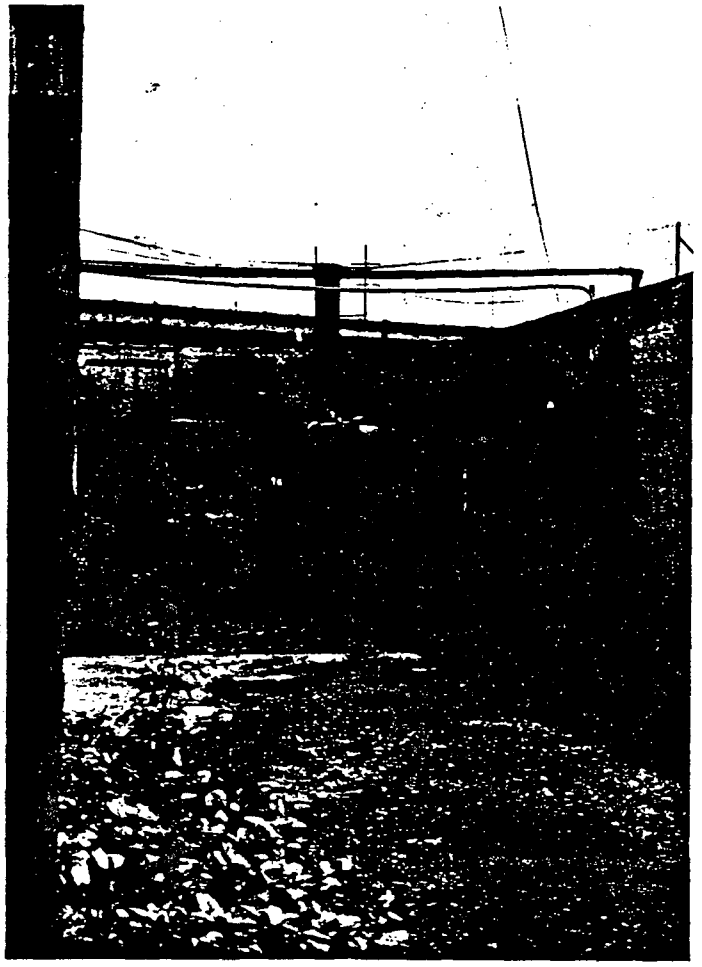
1. Open head drum incinerator
note debris underneath



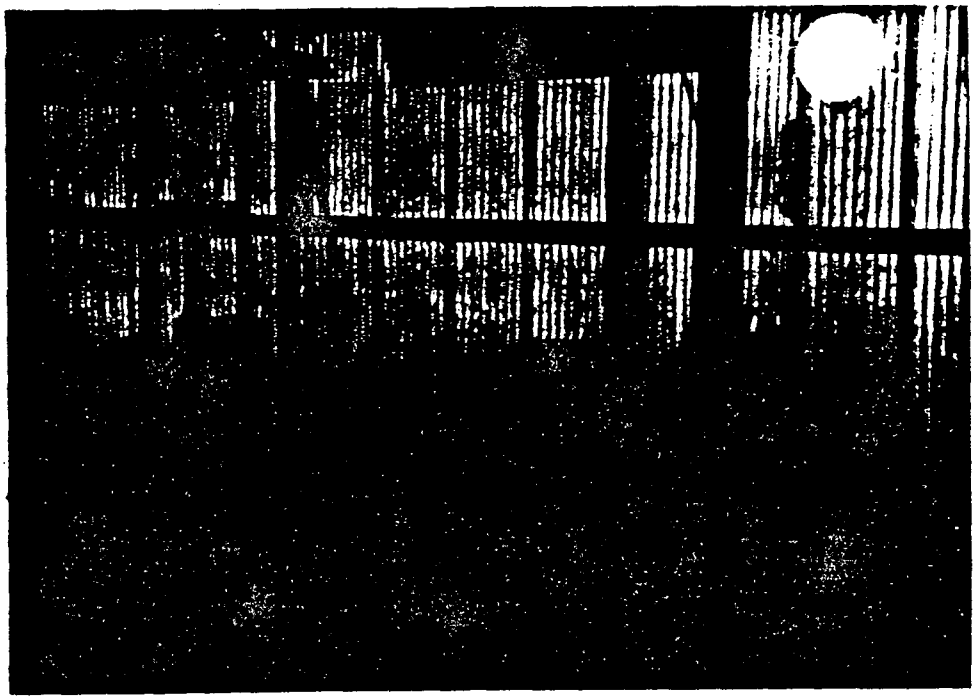
2. Incinerator conveyor with
debris



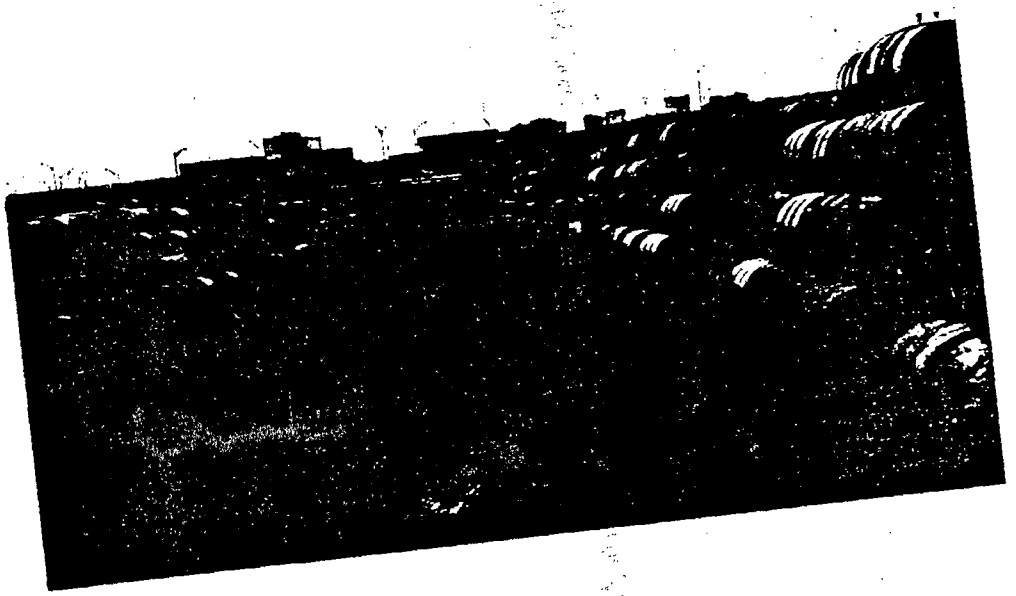
3. Incinerator alley



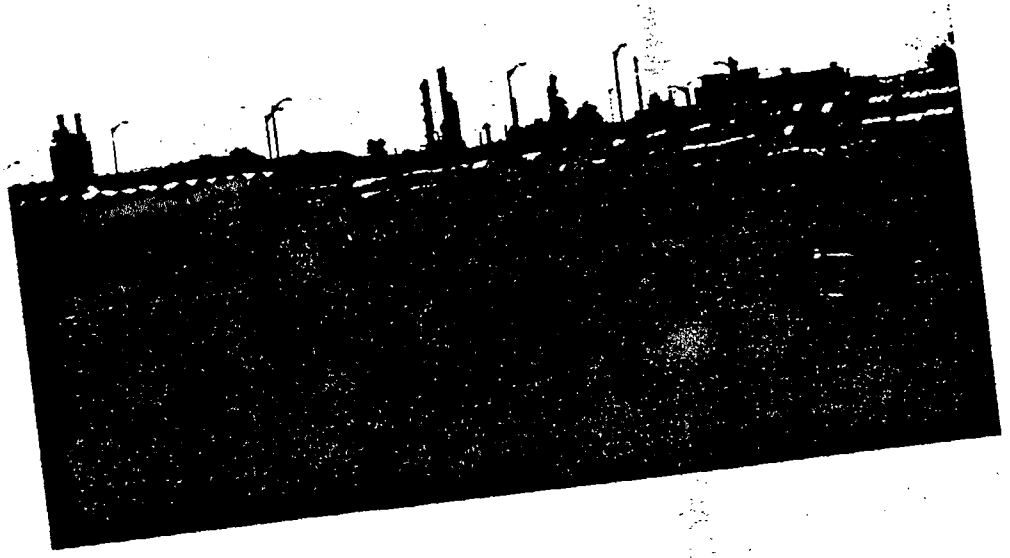
4. Location of "sump pit"
where we measured 90 ppm



5. Drum storage in rows



6. More drum storage and
northeast corner of ash pile.



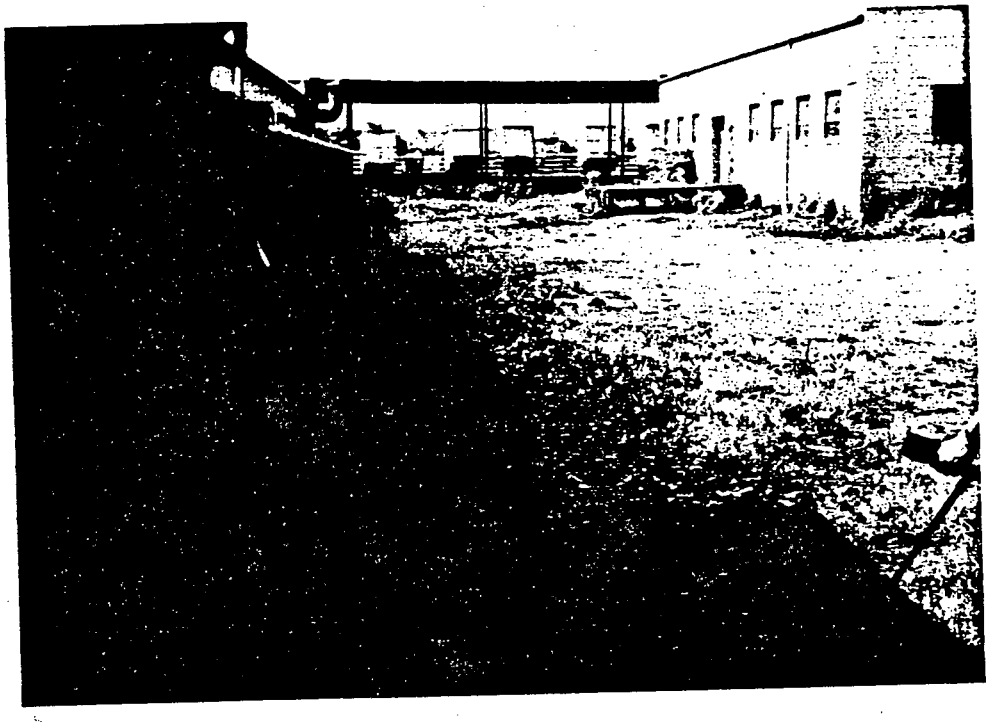
7. Ash pile with drive-in sign in background

8. TAT members Moylan and Marlowe use OVA while NJDEP rep Sickels observes

9. Pool of water on top of the ash pile. Note lack of protective cover.

10. Waste burner and 60,000 gallon tank. Pulaski Skyway in background.

11. Disturbed earth near the northwest corner of the open head building.



AIR MONITORING DATA SHEE

ate: August 8, 1989 Site Identification: Bayonne Barrel

erson Sampling: Craig Maylon Qualified By: TATL ✓ EPA__ Other__

Meteorological Conditions

emperature: 86 °F Wind Speed: 5-10 Direction: NW → SE

arometric Pressure: ? Relative Humidity: 60%

loud Cover - Type: haze Amount: all

recipitation - Type: none Amount:

Instrument Data

PA Sticker Number: 190017 Calibration/Service Date: None

erson Calibrating: Craig Maylon Qualified By: TATL X EPA__

alibration Data: field only

NU: Type of Probe(s) 9.5, 10.2, 11.7 eV (Circle One)

Date Lens Cleaned:

A: Mode Used: Survey

Type & Number of Column:

Type of Probe: long

Filters: particulate

Motte Impinger: Specific Kit(s) Used:

Flow Rate(s):

etector Tubes: Type of Unit: (Bendix, Draeger, etc.)

Specific Tube(s):

Tube Lot Number:

Tube Expiration Date:

Number of Pump Strokes/Sample Volume:

adiation Meter: Type of Radiation Monitored:

Meter: Suspected Contaminants:

Data Sheet

Exact Location: Background

Chemical Monitored: OVA — Amount Measured: 2ppm

Time Started: 9:40 — Time Finished: ____

Exact Location: Open head bldg drain area

Chemical Monitored: OVA — Amount Measured: ——

Time Started: ____ — Time Finished: ____

Exact Location: North end of Conveyor incinerator

Chemical Monitored: OVA — Amount Measured: 10ppm

Time Started: ____ — Time Finished: ____

Exact Location: Paint in paint line Open head

Chemical Monitored: OVA — Amount Measured: ——

Time Started: ____ — Time Finished: ____

Exact Location: Sump pit at North end of paint line

Chemical Monitored: OVA — Amount Measured: 90ppm

Time Started: ____ — Time Finished: ____

Exact Location: lunchrooms + lockers rooms

Chemical Monitored: OVA — Amount Measured: ——

Time Started: ____ — Time Finished: ____

Exact Location: Vapor at base of drum in vent stack

Chemical Monitored: OVA — Amount Measured: 20ppm

Time Started: ____ — Time Finished: ____

Data Sheet

Exact Location: Inside a drum labelled "TOI"

Chemical Monitored: OVA Amount Measured: 100 ppm

Time Started: Time Finished:

Exact Location: Surface of Waste pile Ash

Chemical Monitored: OVA Amount Measured: —

Time Started: Time Finished:

Exact Location: Ooze from bottom of Ash pile North

Chemical Monitored: OVA Amount Measured: 10 ppm

Time Started: Time Finished:

Exact Location: Ooze from Ash pile South

Chemical Monitored: OVA Amount Measured: 10 ppm

Time Started: Time Finished:

Exact Location: ~~Roof D~~ Ambient air in SE quad

Chemical Monitored: OVA Amount Measured: 10 PPM

Time Started: smelled sweet Time Finished:

Exact Location: Roof Drain near S. End Open Head line

Chemical Monitored: OVA Amount Measured: 10 ppm

Time Started: Time Finished:

Exact Location: Oil/Water Trench S end (green)

Chemical Monitored: OVA Amount Measured: —

Time Started: Time Finished:

Data Sheet

Exact Location: Oil Water Trench N. End (east)

Chemical Monitored: OVA Amount Measured: 15 ppm

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____

Exact Location: _____

Chemical Monitored: _____ Amount Measured: _____

Time Started: _____ Time Finished: _____